RUKMINI DEVI PUBLIC SCHOOL
The School with a difference
Under the aegis of Seth Pokhar Mal Educational Society
Tel : 09996547888, 09729086888, 09996494331
E-mail : contact@rdps-nh1.edu.in, website : www.rdps-nh1.edu.in
Affiliated to CBSE - New Delhi (Affiliation No. : 531276)
43.7 Milestone, NH-1,
Vardaan Chowk, Sec-7,
Sonepat

Winter Holidays Homework

CLASS -XI (All Three Streams)

Holidays are a well deserved opportunity to relax and rewind by indulging in activities that are pleasurable and also educative. You must enjoy your break but at the same you must also give proper attention to your studies.

Dear students : -

1. Neatness and presentation are the common parameters for the assigned work. Please maintain the quality of work done.

2. Complete and submit the holiday homework according to the dates given by the subject teachers.

3. Ensure to strike a balance between your leisure time and studies.

4. Highlight areas of doubt and clarify with the teachers after vacation.

5. Develop a reading habit & refer to different books for strengthening the conceptual knowledge.

6. Stay safe and be good.

7. Complete your project and practical file.

8. Do the given assignments on A4 size sheets.

English Core

Assignment 1

1. Write in your words the conversation between Mrs Pearson and Mrs Fitzgerald in the beginning of the play. What is the outcome of the meeting?

2. "Sometimes it is good for people to have their feelings hurt." Who says this and what does she say to hurt Mr Pearson?

3. Mrs Fitzgerald's effort does not go in vain, as the family changes for the better. Justify.

4. Bring out the hypocrisy that the adults exhibit with regard to love.

Assignment 2

Express your views on the following topic (any two) in 100-120 words on A4 sized sheets.

1. Status of women in Indian Society
2. Efforts; I make to achieve aim
3. Pandemic: A boon or bane for students

Note: Assignment 2 is 'Writing Skills' Project.

Computer Science

1. Discuss the utility and significance of Lists briefly.

2. Differentiate between append() and extend().

3. Define List Slice and explain its use.

4. What is the purpose of the del operator and pop method? Try deleting a slice.

5. Explain List Membership operators.

Chemistry

Q1. When 0.532 g of benzene (C6H6) with boiling point 353 K is burnt with an excess of O2 in a calorimeter, 22.3 kJ of heat is given out. Calculate ΔH for the combustion process (R = 8.31 JK-1 mol-1)

Q2. Two moles of an ideal gas initially at 27°C and one atm pressure are compressed isothermally and reversible till the final pressure of the gas is 10 atm. Calculate q, w, and **Δ**U for the process.

Q3. The heat of combustion of benzene in a bomb calorimeter (i.e. at constant volume) was found to be 3263.9 kJ mol-1 at 25°C. Calculate the heat of combustion of benzene at constant pressure.

Q4. Calculate the bond enthalpy of HCI. Given that the bond enthalpies of H2 and Cl are 430 and 242 kJ mol-1 respectively and for HCI is -91 kJ mol-1.

Q5. Enthalpy and entropy changes of a reaction are 40.63 kJ mol-1 and 108.8 JK-1 mol-1 respectively. Predict the feasibility of the reaction at 27°C.

Q6. Under what conditions the heat evolved or absorbed is equal to the internal energy change?

Q7. What is the sign of ΔH for endothermic reactions and why?

Q8. Why is the enthalpy of neutralization of HF greater than 57.1 kJ mol^{-1}?

Practical file

File Name - Comprehensive Chemistry practical file Volume - 1

Practicals to be covered -

Characterization of Chemical Substances

1. Determination of melting point of an organic compound.
2. Determination of boiling point of an organic compound.

Quantitative Estimation

i) Preparation of standard solution of Oxalic acid.
ii) Determination of strength of a given solution of Sodium hydroxide by titrating it against standard solution of Oxalic acid.
iii) Preparation of standard solution of Sodium carbonate.
iv) Determination of strength of a given solution of hydrochloric acid by titrating it against standard Sodium Carbonate solution.

Qualitative Analysis

a) Determination of one anion and one cation in a given salt
Cations- Pb^{2+}, Cu^{2+}, As^{3+}, Al^{3+}, Fe^{3+}, Mn^{2+}, Ni^{2+}, Zn^{2+}, Co^{2+}, Ca^{2+}, Sr^{2+}, Ba^{2+}, Mg^{2+}, NH^{2+}
Anions – $(CO3)^{2-}$, S^{2-} , NO^{2-} , SO_3^{2-} , SO_4^{2-} , NO_3^-, Cl^-, Br^-, I^-, PO_4^{3-} , $C_2O_4^{2-}$

b) Detection of -Nitrogen, Sulphur, Chlorine in organic compounds.

c) Crystallization of impure samples of any one of the following: Alum, Copper Sulphate, BenzoicAcid.

Physics

Q1. What are scalar and vector quantities?

Q2. The distance 'x' of a particle moving in one dimension under the action of a constant force is related to time t by relation t = x + 3, where 'x' is in m, t is in sec. Find displacement when velocity is zero.

Q3. A body is dropped from the top of a tower, which falls through 40m during the last two seconds of its fall. What is the height of the tower ?

Q4. The displacement of a body is zero. Is the distance covered by it also necessarily zero?

Q5. If a body has constant speed, is it true that it can have acceleration?

Q6. A ball hits a wall with a velocity of 30m/s & rebounces with the same velocity. What is the change in its velocity?

Q7. A ball is thrown straight up. What is its velocity & acceleration at the top?

Q8. The displacement of a body is given to be proportional to the cube of time elapsed. What is the nature of the iceacceleration of the body?

Q9. Two balls of different masses are thrown vertically upwards with same initial speed. Which one will rise to greater height?

Q10. A body covers the first half of the distance between two places at a speed of 40km/h and the second half of the journey at 60km/h. What is the average speed of the car?

Q11. The displacement (in metre) of a particle moving along the X axis is given by x= 3t2+5t+5. Calculate:
Instantaneous velocity at t=2s,
Average velocity between t=2s & t=4s,
Instantaneous acceleration at t=2s.

Q12. On a foggy day two drivers spot each other when they are just 80m apart. They are traveling at 72km/h & 60km/h, respectively. Both of them applied brakes retarding their cars at the rate of 5m/s. Determine whether they avert collision or not.

Q13 .A body starting from rest accelerates uniformly along a straight line at the rate of 10m/s2 for 5s. It moves for 2 seconds with a uniform velocity of 50m/s. Then it retards uniformly and comes to rest in 3s. Draw velocity –time graph of the body and find the distance traveled by the body.

Q14. A body moves through distance x from a point A to a point B and returns back to A by the same path. What will be the distance and the displacement covered by the body?

Q15. A car and a bike with the same kinetic energy are brought to rest by the application of brakes which provide equal retarding forces. Which of them will come to rest in a shorter distance?

Q16. Check the correctness of the equation

a) $S= ut + ½ at^2$

b) $F = mv^2/r$

c) $V= u +at$

Q17. . The centripetal force acting on a body is found to be depending on mass, velocity

and radius of the circular path. Derive a relation for centripetal force using method

of dimensions.

Q18. Convert 1 Newton into dynes.

Q19. Show that path followed by a projectile is parabolic.

Q20. Derive an expression for maximum height, time of flight and horizontal range of a

projectile.

Practical File

File Name - Comprehensive Physics practical file Volume - 1

1. Use of Vernier Callipers to

(i) Measure diameter of a small spherical/cylindrical body,

(ii) Measure the internal diameter and depth of a given cylindrical object like beaker/glass/calorimeter and hence to calculate its volume.

2. Using a Simple Pendulum plot L – T and L – T2 graphs, hence find the effective length of second's pendulum using appropriate graph.

3. Young's modulus of elasticity of a given material of wire.

4. Relationship between temperature of a hot body and time.

5. Variation of time period of a simple pendulum of a given length.

Biology

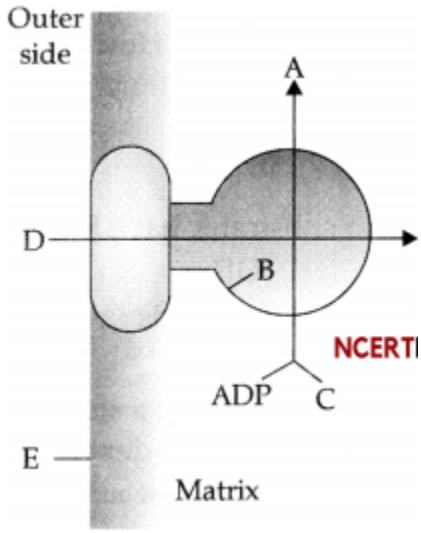
Q1. LH is secreted by Adenohypophysis or anterior pituitary gland.

(a) Mention the other hormone along with which it acts on its target cells/organ.

(b) Give two functions of each hormone.

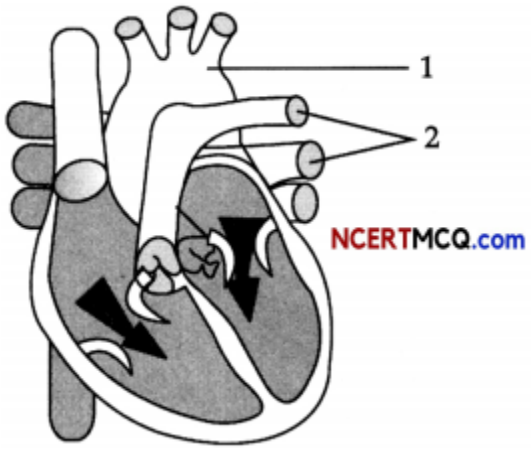
Q2. (a) Given below is the diagram showing ATP synthesis during aerobic respiration, replace the symbols A, B, C, D and E by appropriate terms given below:

F1 particle, Pi, 2H+, Inner mitochondrial membrane, ATE F0 particle, ADP



(b) Define the term ETS**.**

Q3. The diagram given below represents a section of the human heart.



(a) Which parts of the heart are in the diastolic phase? Give a reason to support your answer.

(b) Label the parts numbered 1 and 2 in the diagram. What type of blood flows through them.

(c) What causes the heart sounds 'LUBB' and 'DUBB'.

Q4. (a) How is glomerular filtrate hypertonic and hypotonic in the descending and ascending limb of the loop of Henle respectively?

(b) What is the effect of ADH on collecting tubules?

Q5. Mitosis is the process of cell division in which one cell gives rise to two genetically identical daughter cells, resulting in cell duplication and reproduction. The major purpose of mitosis is for growth and to replace worn out cells, It is divided into four phases, namely, prophase, metaphase, anaphase and telophase.

(a) Why is mitosis an equational division?

(b) What would be the consequences if each of the following irregularities occurs during mitosis?

(i) Nuclear membrane fails to disintegrate

(ii) Duplication of DNA does not occur

(iii) Centromeres do not divide

(iv) Cytokinesis does not occur

Q6. Answer the following questions based on the equation given below:

$2H_2O \rightarrow 2H+ + O_2 + 4e–$

(a) Where in plants does this reaction occur?

(b) What is the importance of this reaction?

Q7. In a certain 'X' organism, a process is occurring throughout the day in which cells are participating. Water, ATP and carbon dioxide are evolved during the process and are not light-dependent processes.

(a) Which process is discussed above?

(b) Is this a catabolic or anabolic process?

(c) Write the raw materials required for this process.

Q8. Who gave the term chromosome?

Q9. What are the main functions of the cell wall?

Q10. Describe the functions of the three organelles, viz Golgi bodies, chloroplasts, and mitochondria.

Q11. Mention the difference between saturated and unsaturated fat?

Q12. Differences between DNA and RNA.

Mathematics

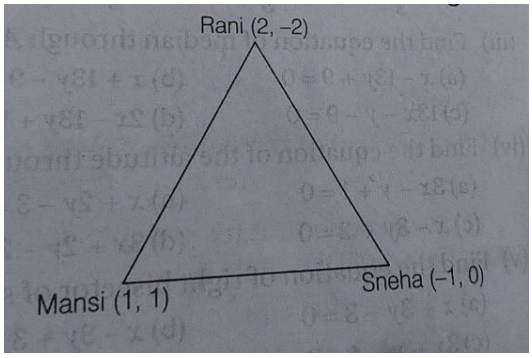
1. Revise chapter- 1,2,3,5 and 12 from NCERT and NCERT exemplar.
2. Complete the questions given below.

A. Five students Ajay, Syam, Rahul ,Ravi and Deepak are getting bored of their regular study. They go to playground and sit in a straight line.
On the basis of above information ,answer the following :

(i) Total number of ways of sitting arrangements of 5 students.
(ii) Total number of sitting if Ajay and Ravi can sit together.

B. In a survey of 60 people, it was found that 25 people read newspaper H, 26 read newspaper T, 26 read newspaper I, 9 read both H and I, 11 read both H and T, 8 read both T and I, 3 read all three newspapers. Find: (i) the number of people who read at least one of the newspapers. (ii) the number of people who read exactly one newspaper.

C. Three girls, Rani, Mansi, Sneha are talking to each other while maintaining a social distance due to covid -19(in triangle form with coordinates). They are standing on vertices of a triangle , whose coordinates are given.



(i) Find the equation of lines formed by Rani and Mansi.
(ii) Find the equation of median of lines through Rani.

D. Look the video and do the activity related to this

https://youtu.be/0DVuXMv6C0c

Then give the answer of following questions

(i) Find the image of (-2,3,4) in YZ plane.
(ii) Find the image of (5,2,-7) in XY plane.
(iii) Find the name of plane in which X-axis and Y-axis taken together.
(iv) A point lies on X-axis what are the coordinates of the point?

(v) Find the octant in which (-5,4,3) lie.
(vi) Find the octant in which (2,4,3) lie.

Accountancy

1. Complete project work upto Trial Balance. (Comprehensive project: Transactions, journal entries, Ledger and Trial Balance)
2. Solve the following questions.

Q1. On 30th June, 2019, bank column of the Cash Book showed balance of ₹ 12,000 but the Pass Book showed a different balance due to the following reasons:
(i) Cheques paid into the bank ₹ 8,000 but out of these only cheques of ₹ 6,500 credited by bankers.
(ii) The receipts column of the Cash Book undercast by ₹ 200.
(iii) On 29th June, a customer deposited ₹ 3,000 directly in the Bank Account but it was entered in the Pass Book only.
(iv) Cheques of ₹ 9,200 were issued of which ₹ 2,200 were presented for payment on 15th July.
(v) Pass Book shows a credit of ₹ 330 as interest and a debit of ₹ 60 as bank charges.
Prepare Bank Reconciliation Statement as on 30th June, 2019.

Q2. Prepare Bank Reconciliation Statement as on 30th September, 2016 from the following particulars:

	₹
(i) Bank Balance as per Pass Book.	10,000
(ii) Cheque deposited into bank but no entry was passed in Cash Book.	500
(iii) Cheque received and entered in Cash Book but not sent to bank.	1,200
(iv) Insurance premium paid directly by the bank.	800
(v) Bank charges entered twice in the Cash Book.	20
(vi) Cheque received entered twice in Cash Book.	1,000
(vii) Bill discounted dishonoured not recorded in the cash book.	5,000

Q3. Tiwari & Sons find that the bank balance shown by their Cash Book on 31st March, 2019 is ₹ 40,500 (credit) but the Pass Book shows a difference due to the following reasons:
(i) A cheque for ₹ 5,000 drawn in favour of Manohar has not yet been presented for payment.
(ii) A post-dated cheque for ₹ 900 has been debited in the bank column of the Cash Book but it could not have been presented in any case.
(iii) Cheques totalling ₹ 10,200 deposited with the bank have not yet been collected and a cheque for ₹ 4,000 has been dishonoured.
(iv) A bill for ₹ 10,000 was retired by the Bank under a rebate of ₹ 150 but the full amount of the bill was credited in the bank column of the Cash Book.
Prepare Bank Reconciliation Statement and find out the balance as per Pass Book.

Q4. Prepare Bank Reconciliation Statement from the following particulars as on 31st March, 2019, when Pass Book shows a debit balance of ₹ 2,500:
(i) Cheque issued for ₹ 5,000 but up to 31st March, 2019 only ₹ 3,000 could be cleared.
(ii) Cheques issued for ₹ 1,000 but omitted to be recorded in the Cash Book.
(iii) Cheques deposited for ₹ 5,500 but cheques for ₹ 500 were collected on 4th April 2019.
(iv) A discounted Bill of Exchange dishonoured ₹ 1,000.

(v) A cheque of ₹ 500 debited in Cash Book but omitted to be banked.

(vi) Interest allowed by bank ₹ 200 but no entry was passed in the Cash Book.

Q5. On 1st April, 2015, furniture costing ₹ 55,000 was purchased. It is estimated that its life is 10 years at the end of which it will be sold for ₹ 5,000. Additions are made on 1st April 2016 and 1st October, 2018 to the value of ₹ 9,500 and ₹ 8,400 (Residual values ₹ 500 and ₹ 400 respectively). Show the Furniture Account for the first four years, if Depreciation is written off according to the Straight Line Method.

Q6. On 1st April, 2015, A Ltd. purchased a machine for ₹ 2,40,000 and spent ₹ 10,000 on its erection. On 1st October, 2015 an additional machinery costing ₹ 1,00,000 was purchased. On 1st October, 2017, the machine purchased on 1st April, 2015 was sold for ₹ 1,43,000 and on the same date, a new machine was purchased at cost of ₹ 2,00,000. Show the Machinery Account for the first four financial years after charging Depreciation at 5% p.a. by the Straight Line Method.

Q7. A boiler was purchased from abroad for ₹ 10,000. Shipping and forwarding charges ₹ 2,000, Import duty ₹ 7,000 and expenses of installation amounted to ₹ 1,000. Calculate the Depreciation for the first three years (separately for each year) @ 10% p.a. on the Diminishing Balance Method.

Business Studies

1. Answer the following questions.

Q1. A micro small scale industry has investment of Rs. 24 lakhs and is engaged in manufacturing business. Now, it wants to increase its investment by Rs. 4 Lakhs. What type of small Business will it become and what is the maximum investment limit in such cases?

Q2. What are the incentives given by Govt. to the Industries set up in hilly, backward and rural areas.

Q3. Discuss the role and importance of small-scale enterprises in the economic development of India?

Q4. Explain Intellectual property rights.

Q5. Explain the following sources of raising startup capital:

(a) Angel investor (b) Crowdfunding (c) Venture capital

Q6. Mention the services provided by wholesalers to retailers.

Q7. Define different types of fixed shop small retailers.

Q8. Give two examples of chain stores.

Q9. Identify the type of itinerant trader from the following:

a) Traders who open their shop on a fixed day.

b) Petty retailers who have temporary independent shops.

c) Traders commonly found in populated areas.

Q10. Mention differences between departmental stores and chain stores.

History

1.Revise syllabus done in class.

2.Complete project work.

3.Solve the following assignment.

ASSIGNMENT

Q1. How did kingship emerge in Mesopotamia? What did the king do to increase his influence and control?

Q2. Briefly describe the social classes of the Roman Empire.

Q3. Why did the nomadic organization of the Mongols have to trade with China? What effect did this trade cast on the Chinese economy and politics?

In what ways do you see the manifestation of speeches so provoking in the period of Nomadic empires?

Q5. Discuss how the new monarchy replaced the feudal set-up of European society?

Q6. How can you say that feudalism had covered social and political aspects of life also?

Q7. Mention the names of women intellectually creative during the period of the renaissance in Europe.

Q8. Describe the different scientific elements in the work of sixteenth-century Italian artists.

Q9. What was the case of the Cherokee tribe in North America?

Q10. Discuss the different images that Europeans and native Americans had of each other and the different ways in which they saw the natives.

Political Science

1. Answer the following questions.

ASSIGNMENT

Q1. What do we study in Political theory? Identify some ways in which political theory is relevant for us.

Q2. What is the need and significance of political theory?

Q3. What is Freedom of expression? What in your view would be a reasonable restriction on this freedom? Give examples.

Q4. Discuss Political, Economic and Moral liberty?

Q5. "It is argued by some that inequality is natural, while some feel it is created by society" which view do you support, give reasons.

Q6. How does Rawls use the idea of a veil of ignorance to argue that fair and just distribution can be defended on rational grounds?

Q7. What does "giving each his/her due mean"? How has the meaning changed over time?

Q8. Democratic citizenship is a project rather than an accomplished fact even in countries like India which grant equal citizenship." Discuss some of the issues regarding citizenship being raised in India today.

Q9. It is believed that a nation is an imagined community held together by shared beliefs, history, shared political ideals and common Political identity.Identify the features that make India a nation.

Q10. What do you understand about secularism? Can it be equated with religious tolerance?

Q11. Why has India opted for the FPTP system? What are the defects of this system?

Q12. How does a bill become a law?

Q13. What were the main differences between the local governments before 73rd amendment and after that amendment

Q14. What is Judicial Activism, how has Public Interest Litigation helped the poor? Give two instances related to promotion of judicial activism. On what grounds is judicial activism criticized?

Economics

- Solve the following assignment.

Assignment

Q1. Write three demerits of mode.

Q2. Explain the four functions of Statistics.

Q3. Explain the properties and application of mean, median and mode.
Q4. Write the four uses of the consumer price index.
Q5. Differentiate between ' Microeconomics' and 'Macroeconomics'.
Q6. State the relationship between marginal cost and average cost with the help of diagram.
Q7. Distinguish between positive economics and normative economics.
Q8. Explain three properties of the Indifference curve.
Q9. Explain the conditions of consumer equilibrium using marginal utility analysis in two commodity case.
Q10. Market for good is in equilibrium. There is decrease in demand for this good. Explain the chain of effects for this change in the market with the help of diagram.
Q11. Calculate the mean, median and mode from the following data:

Class Interval	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50
Frequency	3	6	8	6	3

Q12. Find the Karl Pearson's coefficient of correlation from the following data-

X	**18**	**16**	**14**	**19**
Y	**28**	**22**	**24**	**28**

Q13. Calculate coefficient of rank correlation with the help of Spearman's Rank Correlation method:

X	**30**	**25**	**35**	**43**	**27**	**25**	**31**	**33**
Y	**32**	**30**	**26**	**28**	**27**	**31**	**34**	**28**

Q14. Use Ogive to represent the following data and locate median:

Class Interval	**0 - 10**	**10 - 20**	**20 - 30**	**30 - 40**	**40 - 50**	**50 - 60**
Frequency	**3**	**10**	**20**	**7**	**6**	**4**

Q15. Find the missing value , if mean = 27

X	**0 - 10**	**10 - 20**	**20 - 30**	**30 - 40**	**40 - 50**
f	**3**	**6**	**12**	**?**	

GEOGRAPHY

1. Complete Practical file.
2. Answer the following questions.

ASSIGNMENT

Q1. What are the implications of India having a long coastline?

Q2. Where in India will you find a cold desert ? Name some important ranges of this region.
Q3. Why is the western coastal plain devoid of any delta?
Q4. Why are the terrestrial planets rocky?
Q5. Write an explanatory note on 'Big Bang Theory'.
Q6. Why do earthquake waves develop shadow waves?
Q7. What do you understand by intrusive forms? Briefly describe various intrusive forms.
Q8. Bring about the basic difference between the drift theory and plate tectonics.
Q9. Explain the evidences in support of the continental drift theory.
Q10. Why is the surface of the earth uneven?
Q11. Exogenic geomorphic processes derive their ultimate energy from the sun's heat. Explain.
Q12. Draw a suitable diagram for the structure of atmosphere and describe it.
Q13. What are the factors that control temperature distribution on the surface of the earth?
Q14. What is inversion of temperature ? When and in what regions does it take place?
Q15. Explain the factors affecting insolation at the surface of the earth.